

INTERNATIONAL SEARCH REPORT

International application No.
PCT/JP03/13477

A. CLASSIFICATION OF SUBJECT MATTER

Int.Cl⁷ D01F6/00, 8/00, D06M11/00, 13/00, C08L101/00, D04H1/00,
D21H15/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols) 1 ADD: 2005

Int.Cl⁷ D01F1/00-9/04, D06M11/00-15/72

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	JP 1-282390 A (Toray Industries, Inc.), 14 November, 1989 (14.11.89), Full text (Family: none)	1-13, 16-35, 44, 45 14, 15, 36-38
A	Asao Oya, Naoto Kasahara 'Preparation of thin carbon fibers from phenol-formaldehyde polymer micro-beads dispersed in polyethylene matrix', Carbon 2000, Vol.38, pages 1141 to 1144	1-38, 44, 45
A	JP 2002-173308 A (Mitsubishi Chemical Corp.), 21 June, 2002 (21.06.02), Full text (Family: none)	1-38, 44, 45

☒ Further documents are listed in the continuation of Box C. ☐ See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not
considered to be of particular relevance
"E" earlier document but published on or after the international filing
date
"L" document which may throw doubts on priority claim(s) or which is
cited to establish the publication date of another citation or other
special reason (as specified)
"O" document referring to an oral disclosure, use, exhibition or other
means
"P" document published prior to the international filing date but later
than the priority date claimed

"T" later document published after the international filing date or
priority date and not in conflict with the application but cited to
understand the principle or theory underlying the invention
"X" document of particular relevance; the claimed invention cannot be
considered novel or cannot be considered to involve an inventive
step when the document is taken alone
"Y" document of particular relevance; the claimed invention cannot be
considered to involve an inventive step when the document is
combined with one or more other such documents, such
combination being obvious to a person skilled in the art
"&" document member of the same patent family

Date of the actual completion of the international search
02 February, 2004 (02.02.04)

Date of mailing of the international search report
17 February, 2004 (17.02.04)

Name and mailing address of the ISA/
Japanese Patent Office

Authorized officer

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INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP03/13477

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 4686074 A (Toray Industries, Inc.), 11 August, 1987 (11.08.87), Full text & WO 84/03470 A1 & JP 59-163411 A & JP 59-179812 A & EP 137854 A & US 5154934 A	1-38,44,45
A	JP 5-71006 A (Chisso Corp.), 23 March, 1993 (23.03.93), Full text (Family: none)	1-38,44,45
A	JP 60-21904 A (Toray Industries, Inc.), 04 February, 1985 (04.02.85), Full text (Family: none)	1-38,44,45

Box I Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

Claim describes eight inventions, i.e., (1-13, 16-20, 44, 45) (14,15) (21-38) (39) (40-43) (46-49) (50) and (51).

Nanofiber aggregates which have fineness of 1×10^{-7} to 2×10^{-4} dtex and are made of thermoplastic polymers are publicly known prior to the priority date of this application, and are therefore not a special technical feature. Thus, (1-13, 16-20, 44, 45) (14,15) (21-38) (39) (40-43) (46-49) (50) and (51) do not have any novel special technical feature in common.

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☒ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.: (1-13, 16-20, 44, 45) (14,15) (21-38).
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest ☐ The additional search fees were accompanied by the applicant's protest.
☒ No protest accompanied the payment of additional search fees.

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